WHAT IS CLAIMED IS:

SUB B1

1. An information storage medium which effects writing and reading by laser light which has a film containing 70 atomic % or more of at least one element selected from the group consisting of Cr, Ti, V, Mn, Fe, Co, Ni, Cu, Zn, Zr, Nb and Mo, said film having a thickness of 30 nm or more and having a pillar-like structure continuing from the lower face to the upper face of the film in at least 80% of the section of the film.

2. An information storage medium which has at least two layers each containing 60 atomic % or more of metal at the more back side than the recording film when seen from the light incident side, one of the said layers containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 and having a film thickness of 30 nm or more.

3. The information storage medium according to claim 2 wherein the layer containing 60 atomic % or more of metal contain 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 28 and have a film thickness of 30 nm or more.

4. The information storage medium according to claim 2 which have three above-mentioned layers containing 60 atomic % or more of at least one metal element.

5. The information storage medium according to claim 2 wherein the metal element having an atomic number of not less than 22 and not more than 47 is at least one of Ti and Cr.

6. The information storage medium according to claim 2 wherein, among the at least two layers each comprising metal as the main component, the layer nearest to the light incident side comprises Cr or Mo as the main component.

7. The information storage medium according to claim 2 wherein the layer comprising metal as the main component which contains 60 atomic % of at least one metal element having an atomic number of not less than 22 and not more than 47 and has a film thickness of 30 nm or more is present on the more front side, when seen from the light incident side, than the other layer(s) comprising metal as the main component.

8. The information storage medium according to claim 2 wherein the layer composing metal as the main component which contains 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 and has a film thickness of 30 nm or more is present on the more back side, when seen from the light incident side, than the other layer(s) comprising metal as the main component.

9. The information storage medium according to claim 8 wherein the layer(s) comprising metal as the main component other than the above-mentioned layer

comprising metal as the main component which contains 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 and has a film thickness of 30 nm or more contain(s) 70 atomic % or more of Al or Ag.

10. The information storage medium according to claim 2 wherein the layer between the at least two metal layers and recording film is at least one dielectric material layer and the whole thickness of the at least one dielectric material layer is not less than 10 nm and not more than 50 nm.

11. The information storage medium according to claim 2 wherein the layer containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 has a film thickness of not less than 50 nm and not more than 150 nm.

12. An information storage medium which comprises a substrate and, stacked thereon in the following successive order, at least a dielectric material layer having a thickness of not less than 100 nm and not more than 140 nm, a recording film having a thickness of not less than 5 nm and not more than 20 nm, a dielectric material layer having a thickness of not less than 10 nm and not more than 50 nm, a layer comprising at least one metal element as the main component and having a thickness of not less than 20 nm and not more than 70 nm, a layer containing 60 atomic % or more of at least

one metal element having an atomic number of not less than 22 and not more than 47 and having film thickness of not less than 50 nm and not more than 150 nm, and a layer comprising at least one metal element as the main component and having a thickness of not less than 20 and not more than 200 nm.

13. An information storage medium which comprises a substrate and, stacked thereon in the following successive order, at least a dielectric material layer having a thickness of not less than 100 nm and not more than 140 nm, a recording film having a thickness of not less than 5 nm and not more than 20 nm, a dielectric material layer having a thickness of not less than 10 nm and not more than 50 nm, a layer comprising at least one metal element as the main component and having a thickness of not less than 20 nm and not more than 70 nm, a layer comprising at least one metal element as the main component and having a thickness of not less than 20 nm and not more than 200 nm, and a layer containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 and having a film thickness of not less than 50 nm and not more than 150 nm.

14. The information storage medium according to claim 12 or 13 wherein, among the at least two layers comprising at least one metal element as the main component, the layer of the side nearest to the light incident side comprises Cr or Mo as the main component.

15. The information storage medium according to claim 12 or 13 wherein the layer comprising at least one metal element as the main component and having a thickness of not less than 20 nm and not more than 200 nm contains 70 atomic % or more of Al or Ag.

16. The information storage medium according to claim 2 wherein the recording film effects recording by phase change.

17. The information storage medium according to claim 2 wherein the substrate of the medium has a recording track pitch of not less than 0.3 μm and not more than 0.7 μm and has pit trains which represent address information, etc. at positions shifted from the track center.

18. The information storage medium according to claim 8 wherein the other layer(s) comprising metal as the main component comprise(s) Ag as the main component and the number of layers of the recording stacked film is 6.

19. An information storage medium which effects writing and reading by laser light which has a layer containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47, said film being a film formed at an Ar flow rate of 120 sccm or more.

20. A method of manufacturing an information storage medium which effects writing and reading by laser light which method comprises forming a layer

containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 at an Ar flow rate of 120 sccm or more.

21. An information storage medium which has at least one layer containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 and having a film thickness of 30 nm or more.

22. The information storage medium according to claim 21 wherein the above-mentioned layer containing 60 atomic % or more of at least one metal element having an atomic number of not less than 22 and not more than 47 is a layer of Ti-Cr or V-Cr alloy which contains not less than 30 atomic % and not more than 85 atomic % of Cr, and not less than 15 atomic % and not more than 70 atomic % of Ti or V.

Add B2